इंटरनेट मानक

Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

"जानने का अधिकार, जीने का अधिकार"
Mazdoor Kisan Shakti Sangathan
"The Right to Information, The Right to Live"

"पुराने को छोड नये के तरफ"
Jawaharlal Nehru
"Step Out From the Old to the New"

IS 8604 (1977): Determination of compression strength of iron ore pellets after reduction [MTD 13: Ores and Raw Materials]

"ज्ञान से एक नये भारत का निर्माण"
Satyanarayan Gangaram Pitroda
"Invent a New India Using Knowledge"

Act Number 22 of 2005
The Indian Parliament
RIGHT TO INFORMATION

Made Available By
Public.Resource.Org

"ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है"
Bhartṛhari—Nītiśatakam
"Knowledge is such a treasure which cannot be stolen"

BLANK PAGE

BRUTUM FULMEN

IGNORANTIA JURIS NON EXCUSAT

PROTECTED BY COPYRIGHT

Indian Standard

METHOD FOR DETERMINATION OF COMPRESSION STRENGTH OF IRON ORE PELLETS AFTER REDUCTION

UDC 622·341·1-188 : 620·173

© *Copyright* 1978

INDIAN STANDARDS INSTITUTION
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Price Rs 5·00 Gr I

January 1978

Indian Standard

METHOD FOR DETERMINATION OF COMPRESSION STRENGTH OF IRON ORE PELLETS AFTER REDUCTION

Ores and Raw Materials Sectional Committee, SMDC 16

Chairman	*Representing*
Shri S. Lal	Indian Union Minerals Association, Calcutta
Members	
Shri V. K. Agrawal	Hindustan Aluminium Corporation Ltd, Renukoot
Shri S. B. Bhagwat	Indian Ferro Alloy Producers' Association, Bombay
Shri A. Biswas	R. V. Briggs & Co Pvt Ltd, Calcutta
Shri S. S. Sarkar (*Alternate*)	
Dr J. C. Chakravorthy	National Mineral Development Corp Ltd, Hyderabad
Shri G. V. Subramanya (*Alternate*)	
Shri P. K. Chatterjee	Geological Survey of India, Calcutta
Shri S. Chatterjee	India Iron & Steel Co Ltd, Burnpur
Shri K. K. Guptaroy (*Alternate*)	
Shri P. R. Chauhan	Gujarat Mineral Development Corporation Ltd, Ahmadabad
Shri P. L. Parimoo (*Alternate*)	
Controller	Indian Bureau of Mines, Nagpur
Shri N. N. Subramanyan (*Alternate*)	
Shri D. N. Dey	Regional Research Laboratory (CSIR), Bhubaneshwar
Shri S. Dharanipalan	Research and Development, Hindustan Steel Ltd, Ranchi
Shri A. K. Ghosh (*Alternate*)	
Shri S. Y. Ghorpade	The Sandur Manganese & Iron Ores Ltd, Yeshwantnagar
Shri V. K. Kalia (*Alternate*)	
Shri K. N. Gururajachar	Essen & Co, Bangalore
Shri Jankiraman	Bokaro Steel Ltd, Bokaro
Shri T. Balasubramaniam (*Alternate*)	
Shri G. P. Mathur	National Metallurgical Laboratory (CSIR), Jamshedpur
Shri A. K. Mitra	Mitra S. K. Pvt Ltd, Calcutta
Shri M. N. Mitra (*Alternate*)	

(*Continued on page* 2)

© *Copyright* 1978
INDIAN STANDARDS INSTITUTION
This publication is protected under the *Indian Copyright Act* (XIV of 1957) and reproduction in whole or in part by any means except with written permission of the publisher shall be deemed to be an infringement of copyright under the said Act.

(*Continued from page* 1)

Members	*Representing*
SHRI P. S. NARAYANA	Engineering & Mineral Industrial Research Laboratory, Bangalore
SHRI P. S. VENKATACHALAPATHY (*Alternate*)	
SHRI H. V. PALIWAL	Hindustan Zinc Ltd, Udaipur
SHRI S. V. VENKATOSH (*Alternate*)	
SHRI S. RANGACHARI	Minerals & Metals Trading Corporation of India Ltd, New Delhi
SHRI G. V. U. RAO	Bhabha Atomic Research Centre, Bombay
SHRI N. K. RAO (*Alternate*)	
SHRI A. K. SAHA	National Test House, Calcutta
SHRI L. D. SAMANT	Chowgule & Co Pvt Ltd, Mormugao Harbour, Goa
SHRI D. K. SENGUPTA	M. N. Dastur & Co Pvt Ltd, Calcutta
SHRI D. S. BASU (*Alternate*)	
SHRI D. K. SOOD	Hindustan Steel Ltd, Ranchi
SHRI N. C. SENGUPTA (*Alternate* I)	
SHRI A. B. SRIVASTAVA (*Alternate* II)	
SHRI R. THYAGARAJAN	Indian Aluminium Co Ltd, Calcutta
SHRI C. R. RAMA RAO, Director (Struc & Met) (*Secretary*)	Director General, ISI (*Ex-officio Member*)

Subcommittee for Physical Tests on Iron Ores, SMDC 16 : 1

Convener	
SHRI P. S. NARAYANA	Engineering & Mineral Industrial Research Laboratory, Bangalore

Members	
SHRI D. B. ASTHANA	National Mineral Development Corp Ltd, Hyderabad
SHRI S. K. BHATTACHARJEE	Bokaro Steel Ltd, Bokaro Steel City
SHRI SUSHIL K. BHATTACHARYA (*Alternate*)	
SHRI S. C. CHAKRABORTY	Geological Survey of India, Calcutta
SHRI V. D. CHOWGULE	Chowgule & Co Pvt Ltd, Mormugao Harbour, Goa
SHRI L. D. SAMANT (*Alternate*)	
CONTROLLER	Indian Bureau of Mines, Nagpur
SHRI K. SATYANARAYANA (*Alternate*)	
SHRI S. K. DIKSHIT	The Indian Iron & Steel Co Ltd, Burnpur
SHRI A. DAS (*Alternate*)	
SHRI K. N. GUPTA	National Metallurgical Laboratory (CSIR), Jamshedpur
SHRI T. A. SUBRAMANIAM	Hindustan Steel Ltd, Ranchi
SHRI M. S. KRISHNASWAMY (*Alternate*)	

Indian Standard

METHOD FOR DETERMINATION OF COMPRESSION STRENGTH OF IRON ORE PELLETS AFTER REDUCTION

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 31 October 1977, after the draft finalized by the Ores and Raw Materials Sectional Committee had been approved by the Structural and Metals Division Council.

0.2 In recent years there has been a wide interest in assessing the quality of blast furnace burden during reduction and, as such, the conditions are being laid down to ensure requisite characteristics in the quality of the raw materials. This standard is one of such standards and relates to determination of crushing strength of iron ore pellets after reduction.

0.3 In reporting the result of a test made in accordance with this standard, if the final value, observed or calculated, is to be rounded off, it shall be done in accordance with IS : 2-1960*.

1. SCOPE

1.1 This standard prescribes the method for measuring the crushing strength of iron ore pellets after they are reduced as per reducibility test conducted in accordance with IS : 8167-1976†.

2. SUMMARY OF METHOD

2.1 Individual reduced iron ore pellets are placed in a compressive testing machine and a load is applied at constant speed of compressive platen until the pellet breaks. The maximum pressure applied until the pellet breaks is recorded in kilograms.

---

*Rules for rounding off numerical values (*revised*).

†Method for determination of reducibility of iron ore and sinter.

3. APPARATUS

3.1 Compressive strength testing machine having a capacity 200 kg with surface hardened platens and a mechanism to apply increasing pressure so as to move one of the platens (normally lower) towards the other at a constant rate of 5 mm/min until the pellet breaks. The pressure indicating gauge shall be equipped with needle rider so as to indicate the maximum pressure applied for breaking the pellet. The gauge shall be graduated in minimum division of not more than 1 kg.

4. SAMPLE

4.1 The sample to be used shall be representative of the pellets remained after reduction.

4.2 The samples of pellets selected for the final compression strength tests after reduction shall be whole pellets (excluding broken and chipped pellets) available from reducibility tests conducted in accordance with IS : 8167-1976*.

5. PROCEDURE

5.1 Place a pellet at the centre of the lower platen of the testing machine.

5.2 Apply load at a speed of 5 mm/min of compression platen, on each pellet.

5.3 Record the maximum load at which the pellet breaks to the nearest kg for each pellet.

6. EXPRESSION OF THE RESULT

6.1 The average figure of the above maximum load of compression of all the pellets tested shall be reported. Also, the number of pellets tested, individual crushing strengths, their size range and the maximum and minimum values of the crushing strength shall be reported.

---

*Method for determination of reducibility of iron ore and sinter.